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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,318	10/31/2003	Kiyonori Watanabe	OHG 144	8511
23995	7590	03/02/2005	EXAMINER	
RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005			WEISS, HOWARD	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,318

Applicant(s)

WATANABE, KIYONORI

Examiner

Howard Weiss

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1003, 0704, 1104.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Attorney's Docket Number: OHG 144

Filing Date: 10/31/03

Continuing Data: none

Claimed Foreign Priority Date: 11/8/02 (JPX)

Applicant(s): Watanabe

Examiner: Howard Weiss

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of wire patterns extending from the electrode pads to the surface of the extension portion and a thin oxidation layer formed on a surface the electrode posts must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1 to 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shizuno (U.S. Patent Application No. 2004/0130022 A1 and herein after referred to as Shizuno '022)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Shizuno '022 shows all aspects of the instant invention (e.g. Figures 20) including:

- a base **12**
- an insulating extension **20** having a concave portion with inclined inside walls and formed from material with the properties claimed (Paragraphs [0197] to [0199])

- a semiconductor chip **30** within said concave portion and with a plurality of electrode pads **34** on a first surface **36**, a second surface **38** and side surfaces **37**
- an insulating and surface protection film **40** formed on said first surface, on said side surfaces and said extension portion such as to expose said electrode pads
- a plurality of wiring patterns **42** form on said insulating film and connected as claimed and wider or more thickly in the areas claimed
- conductive posts **46** connected to said pads aid posts having the insulating film on a surface of said posts
- a sealing portion **44** formed on said wiring pattern and exposing said posts
- a plurality of external terminals **47** made of solder balls

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1 to 6, 9 to 13 and 16 to 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (U.S. Patent No. 6,222,259) and Tokuda et al. (U.S. Patent No. 5,870,289).

Park et al. show most aspects of the instant invention (e.g. Figures 1 and 10) including:

- a base **80**
- an insulating extension **50** having a concave portion with inclined inside walls **52**
- a semiconductor chip **30** within said concave portion and with a plurality of electrode pads **31** on a first surface, a second surface and side surfaces

- a plurality of wiring patterns **100** connected as claimed and wider or more thickly in the areas claimed
- a sealing portion **120** formed on said wiring pattern
- a plurality of external terminals **150** made of solder balls

Park et al. do not show an insulating and surface protection film formed on said first surface, on said side surfaces and said extension portion such as to expose said electrode pads and conductive posts connected to said pads and posts having the insulating film on a surface of said posts. Tokuda et al. teach (e.g. Figure 4) to form an insulating **250** and surface protection **230** film on a semiconductor chip **210** and an extension portion **260** such as to expose electrode pads **11** and conductive posts **240** connected to said pads and posts having the insulating film on a surface of said posts to provide an inexpensive means to connect wires and pads (Column 3 Lines 37 to 40). It would have been obvious to a person of ordinary skill in the art at the time of invention to form an insulating and surface protection film on a semiconductor chip and an extension portion such as to expose electrode pads and conductive posts connected to said pads and posts having the insulating film on a surface of said posts as taught by Tokuda et al. in the device of Park et al. to provide an inexpensive means to connect wires and pads.

6. Claims 7, 8, 14, 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. and Tokuda et al., as applied to Claims 1, 9 and 16 above, and further in view of Yamaguchi et al. (JP 2000-124354 A).

Park et al. and Tokuda et al. show most aspects of the instant invention (Paragraph 5) except for the extension portion being made of an insulating resin having the properties claimed. Yamaguchi et al. teach (e.g. Figures 1) to make an extension portion **3** of an insulating resin to be able to position the wiring pattern with high accuracy (see Solution). It would have been obvious to a person of ordinary skill in the art at the time of invention to make an extension portion of an insulating resins

taught by Yamaguchi et al. in the device of Park et al. and Tokuda et al. to be able to position the wiring pattern with high accuracy.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1 to 4 and 6 to 20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 10 of copending Application No. 10/722,446. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant invention's claims are broader than the copending Application No. 10/722,446's claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 1 to 8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 9 of copending Application No. 10/697,247. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant invention's claims are broader than copending Application No. 10/697,247's claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

10. Paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yukawa (U.S. Patent No. 6,320,267) teach the use of posts and Kolesar, Jr. (U.S. Patent No. 4,989,063) teach the ^{USE} ~~use~~ of insulating film and inclined walls.
12. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(703) 872-9306**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.

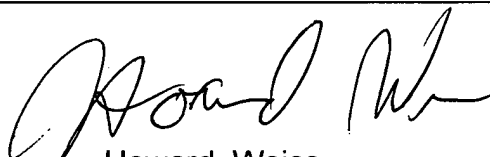
Art Unit: 2814

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Weiss at **(571) 272-1720** and between the hours of 7:00 AM to 3:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via Howard.Weiss@uspto.gov.

14. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es):	
Other Documentation:	
Electronic Database(s):	

HW/hw
1 March 2005



Howard Weiss
Primary Patent Examiner
Art Unit 2814